

CLAIMS

1. An elevator control apparatus characterized by comprising:
 - a winch for driving a car to move upward and downward;
 - an electric motor that generates a driving force for said winch;
 - an inverter that controls said electric motor so as to variably change its speed; and
 - an ECU that controls said inverter;wherein said winch, said electric motor, said inverter, and said ECU together constitute a drive control device for said car, and are installed while being integrated with one another.
2. The elevator control apparatus as set forth in claim 1, characterized by further comprising:
 - a hall call button that is installed in a hall and generates, when operated, a hall call;
 - a car call button that is installed in said car and generates, when operated, a hall call; and
 - a traffic control device that controls the operation of said car by generating a traffic pattern from a current position of said car to a destination floor in response to said hall call or said car call;wherein said traffic control device is installed while being divided from said drive control device.
3. The elevator control apparatus as set forth in claim 2, characterized in that:
 - said drive control device is installed in a hoistway for said car;
 - said traffic control device is installed in a position accessible by an operator; and
 - the installation location of said traffic control device includes said hall, the inside of a wall of said hall, and a wall in said hoistway.

4. The elevator control apparatus as set forth in claim 2, characterized in that:
 - said drive control device is installed in a hoistway for said car; and
 - said traffic control device is installed in said car.
5. The elevator control apparatus as set forth in any one of claims 2 through 4, characterized by further comprising:
 - a signal transmission part that is arranged between said drive control device and said traffic control device;
 - wherein said signal transmission part uses serial communication, optical communication, radio communication or power line multiplex communication.
6. The elevator control apparatus as set forth in any one of claims 1 through 5, characterized in that:
 - said drive control device is integrally constructed by resin molding.
7. The elevator control apparatus as set forth in claim 6, characterized by further comprising:
 - cooling fins that are made of metal and serve to cool said electric motor and said inverter.
8. The elevator control apparatus as set forth in any one of claims 1 through 5, characterized in that:
 - said inverter comprises a power conversion device of a matrix converter circuit type; and
 - said drive control device is integrally constructed by using said power conversion device.
9. The elevator control apparatus as set forth in any one of claims 2 through 8, characterized in that:
 - said traffic control device comprises a general-purpose personal computer.
10. The elevator control apparatus as set forth in any one of claims 2

through 9, characterized in that:

said drive control device comprises a plurality of drive control devices for individually controlling a plurality of cars;

said plurality of drive control devices are each integrally constructed individually;

said traffic control device comprises a single traffic control device that performs traffic control of said plurality of drive control devices; and

said single traffic control device centrally controls said plurality of cars.

11. The elevator control apparatus as set forth in claim 10, characterized in that:

said plurality of drive control devices respectively include individual main sheaves, and an individual rope wrapped around said main sheaves; and

a counter weight is hung at one end side of said rope, and said car is hung at the other end side of said rope.